GRAVEL RUNWAY SURFACE EFFECTS ON AIRCRAFT PERFORMANCE DURING WINTER OPERATIONS: A PRELIMINARY STUDY

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ABSTRACT

This presentation addresses the influence of surface characteristics of gravel runways and their effect on traction performance of general aviation aircraft during winter operations. Preliminary tests were conducted on a gravel runway in Alaska during winter to characterize its friction characteristics and the corresponding influence on the performance of a Cesna 172 aircraft. Maximum G values measured during aircraft landing were correlated with landing velocity and stopping distance. The results are preliminary as they cover only tests performed in January 2002 for one type of aircraft and one runway location.